

=> d his

(FILE 'HOME' ENTERED AT 14:43:56 ON 15 OCT 2007)

FILE 'REGISTRY' ENTERED AT 14:44:18 ON 15 OCT 2007

L1 1 S 7664-41-7

L2 1 S 1314-23-4

L3 1 S 13463-67-7

L4 72 S TITANIUM OXIDE AND SULFATE

FILE 'CA' ENTERED AT 14:48:08 ON 15 OCT 2007

L5 1895 S (L1 OR NH3 OR AMMONIA) (4A) (MONITOR OR SENSOR OR DETECTOR OR
(MONITORING OR SENSING OR SENSITIVE OR DETECTION OR ANALYSIS) (2A)
(FILM OR LAYER OR MATERIAL OR ELEMENT))

L6 47 S L5 AND(L2 OR ZIRCONIA OR ZRO2 OR (ZIRCONIUM OR ZR) (1A) (OXIDE OR
DIOXIDE OR OXYNITRATE))

L7 81 S L5 AND(L3 OR SO42 OR SULFATE)

L8 0 S L5 AND L4

L9 1 S L4 AND(GAS? OR VAPOR? OR VOLATIL? OR ODOR?) (5A) (MONITOR OR SENSOR
OR DETECTOR OR (MONITORING OR SENSING OR SENSITIVE OR DETECTION OR
ANALYSIS) (2A) (FILM OR LAYER OR MATERIAL OR ELEMENT))

L10 119 S L6-9

L11 70 S L10 AND PY<2003

L12 42 S L10 AND PATENT/DT AND PY<2005

L13 77 S L11-12

=> d bib,ab,kwic l13 1-77

L13 ANSWER 12 OF 77 CA COPYRIGHT 2007 ACS on STN

AN 138:18850 CA

TI Detection of ammonia using a **zirconia**-based potentiometric sensor with a tungsten-oxide electrode

AU Kubinski, David; Soltis, Richard; Visser, Jacobus; Parsons, Michael

CS Ford Research Laboratory, Dearborn, MI, 48121-2053, USA

SO Proceedings - Electrochemical Society (**2001**), 2001-18 (Chemical and Biological Sensors and Analytical Methods II), 615-621

AB The response of a potentiometric exhaust gas **sensor** to 0-250 ppm **NH3** was studied in the range 500-650° and in the presence of up to 9.9% O2 (balance N2). The sensor consisted of a W oxide electrode sputter-deposited on an yttria-stabilized **zirconia** disk, with a Pt ref. electrode on the opposite face exposed to air. The response to NH3 decreases with higher temps. and O2 concns. At 600° and in 9.9% O2 the response to NH3 was fairly linear (~0.13mV/ppm). The magnitude of the response to NH3 in 9.9% O2 was compared to that for NO, NO2, and C3H6. For T ≥ 550°, the response to NO2 and C3H6 was only ~20% of that for NH3, with little sensitivity to NO observable. The sensitivity to NH3 at 600°, however, decreases by >30% in the presence of 200 ppm NO2.

IT **1314-23-4D, Zirconia**, yttria-stabilized 1314-36-9D, Yttria, **zirconia** stabilized by 64417-98-7, Yttrium **zirconium oxide** (detection of ammonia using a **zirconia**-based potentiometric sensor with a tungsten-oxide electrode)

=> log y

STN INTERNATIONAL LOGOFF AT 14:57:42 ON 15 OCT 2007